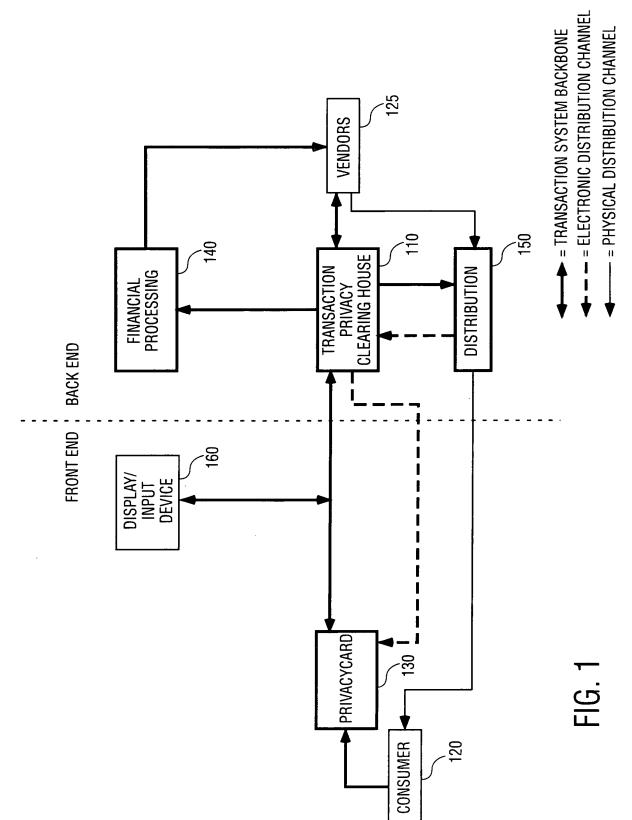
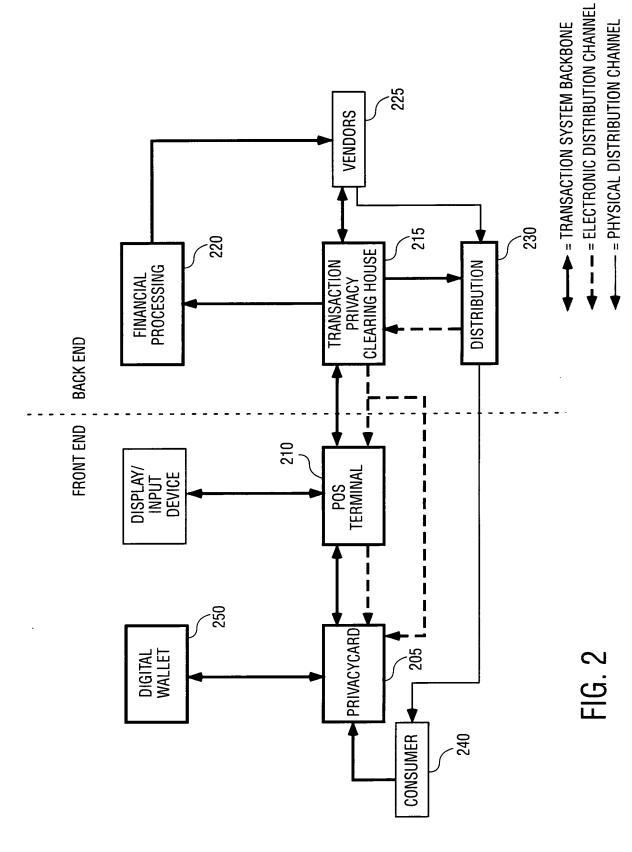
COMMERCE GENERAL ARCHITECTURE

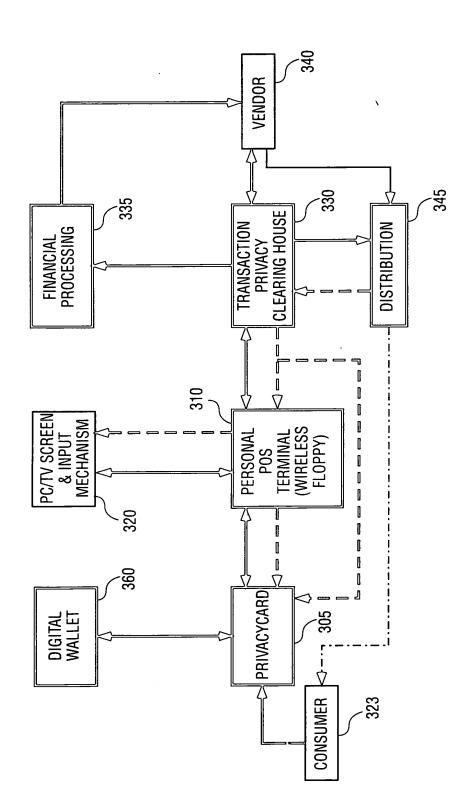
7



COMMERCE GENERAL ARCHITECTURE - POS TERMINAL:

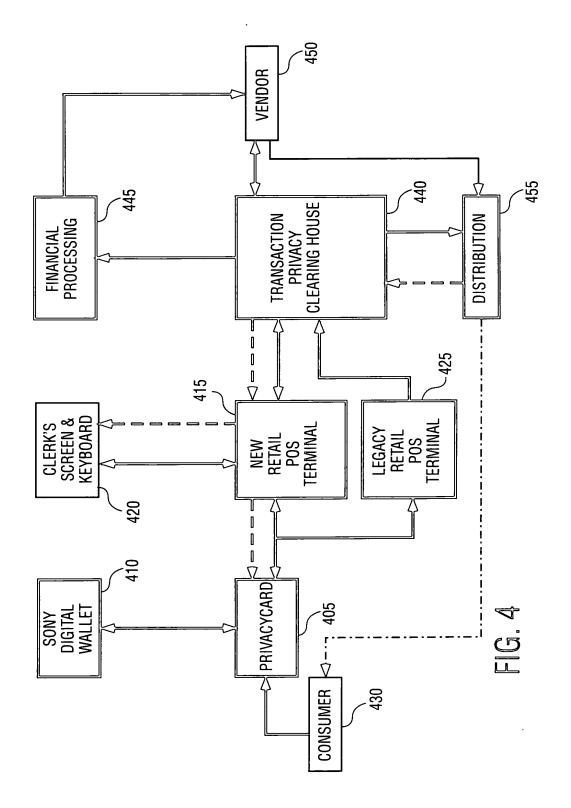


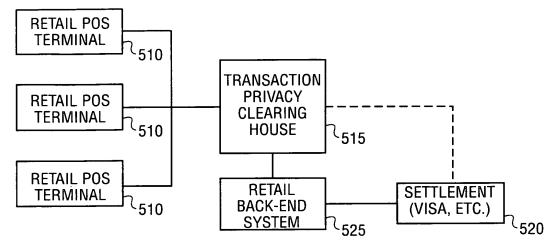
Commerce In-Home Environment



F G .3

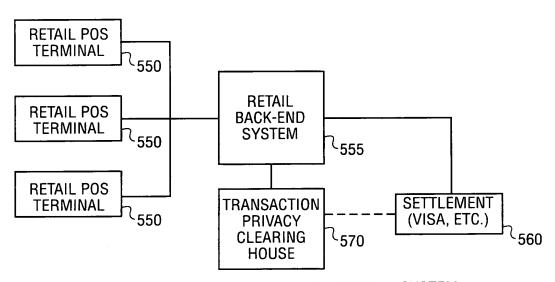
IN-STORE RETAIL ENVIRONMENT





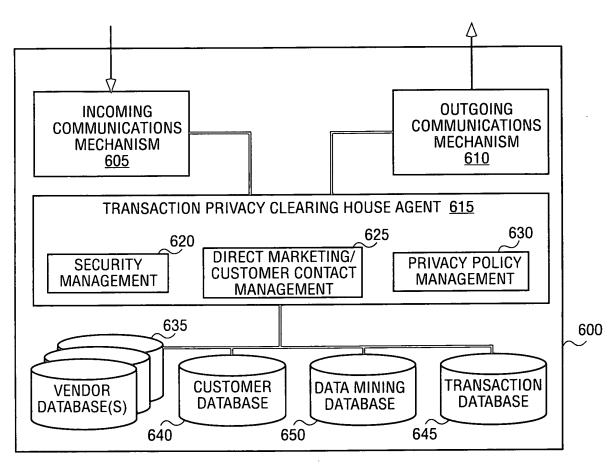
A RETAIL SYSTEM MODIFIED TO SUPPORT THE INTERACTION OF LEGACY POS TERMINAL WITH THE DIGITAL WALLET SYSTEM

FIG. 5A



AN ALTERNATIVE EMBODIMENT OF THE RETAIL SYSTEM MODIFIED TO SUPPORT THE INTERACTION OF LEGACY POS TERMINALS WITH THE DIGITAL WALLET SYSTEM

FIG. 5B



TRANSACTION PRIVACY CLEARING HOUSE: MAJOR COMPONENTS

FIG. 6

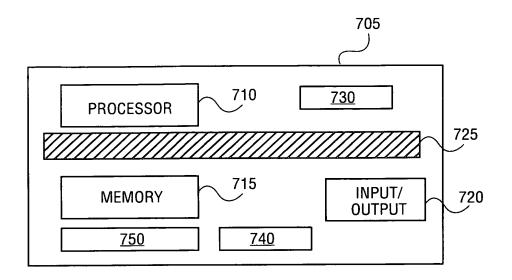


FIG. 7A

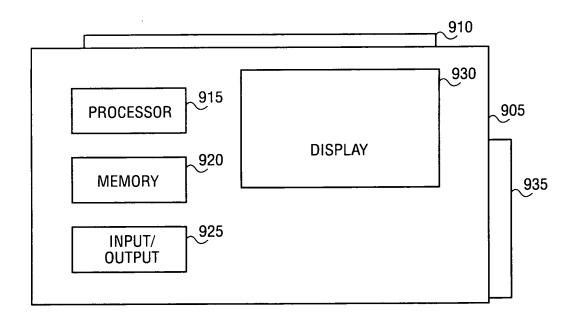


FIG. 9A

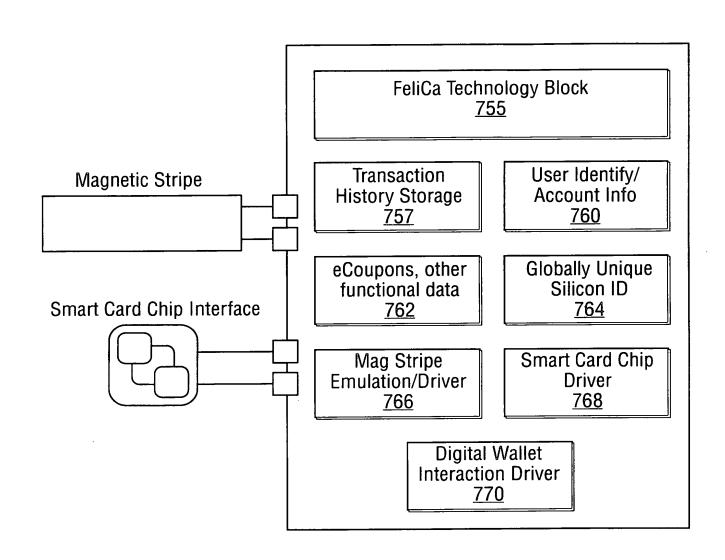


FIG. 7B

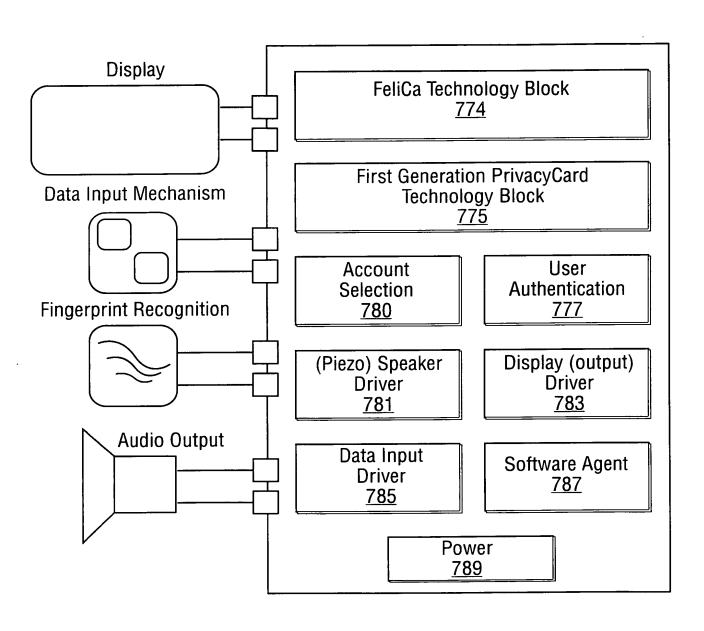
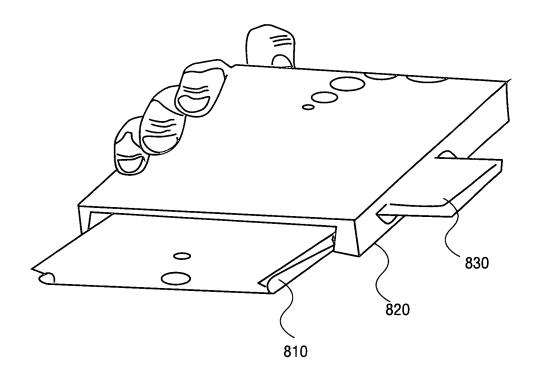


FIG. 7C



DIGITAL WALLET AND PRIVACY CARD

FIG. 8





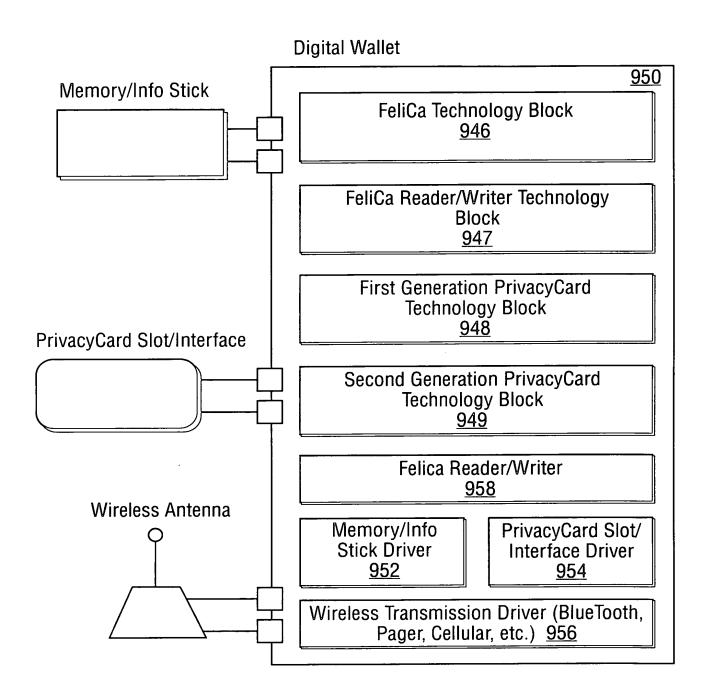
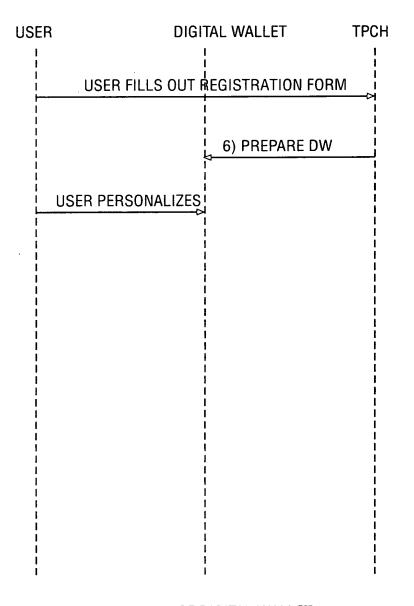
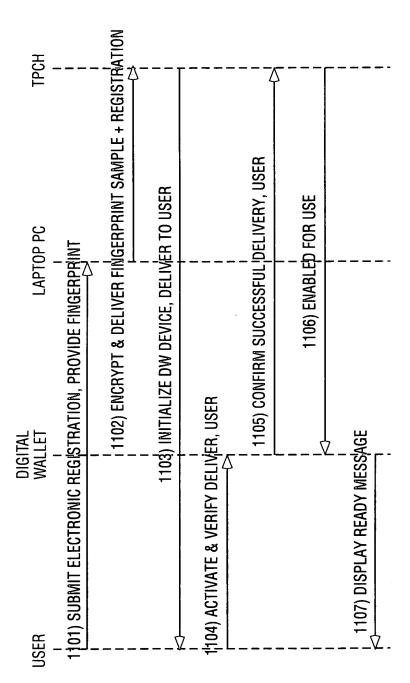


FIG. 9B



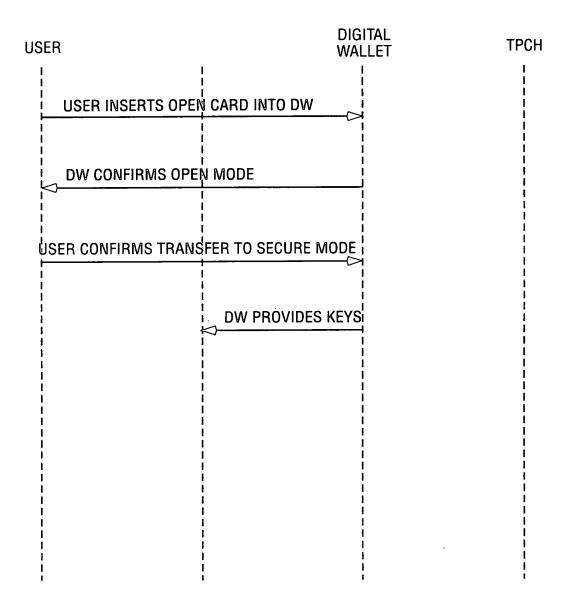
SETUP OF DIGITAL WALLET

FIG. 10



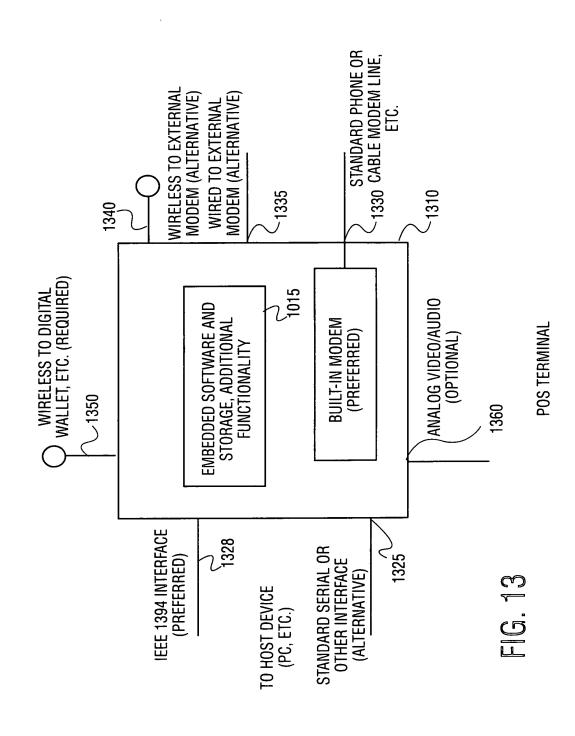
DIGITAL WALLET SETUP (ALTERNATIVE EMBODIMENT)

FIG. 11



CONVERSION OF CARD TO SECURE

FIG. 12



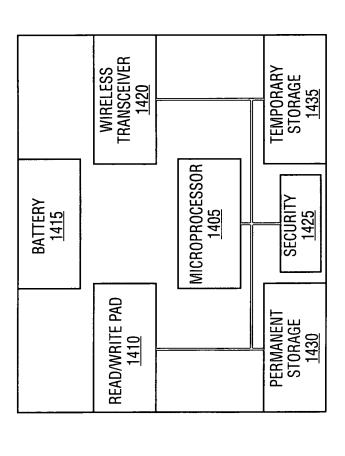


DIAGRAM OF THE MAJOR COMPONENTS OF THE PERSONAL POS, SHOWING THE DATA/ADDRESS BUS INTERCONNECT

FIG. 14

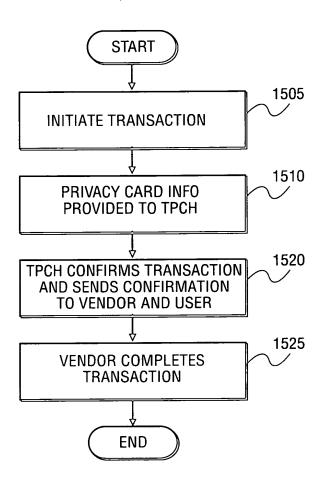


FIG. 15

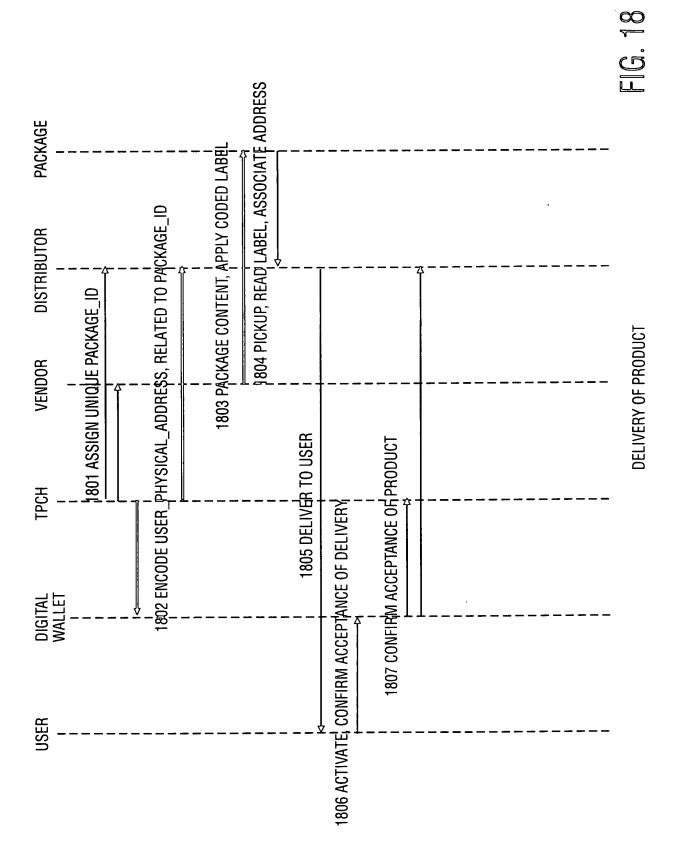
VENDOR !		. – – –			. -), ACCOUNT INFO	NA∯TION	DATA MINING INFO	_		· 		 FIG. 16
TPCH V	_'			·	. 		·		-		ST: PURCHASE RECORI	1616, 1617 TRANSACTION CONFIRMATION	1619 SETTLE FUNDS, DATA MINING INFO		· - -		<u> </u>	
RETAIL POS TERMINAL	TRIGGER PURCHASE	1602 DISPLAY CURRENT TOTAL				1608 SCAN BARCODES	STRIPE		-	1614 SWIPE CARU	1615 TRANSACTION REQUEST: PURCHASE RECORD, ACCOUNT INFO	1616, 1617			SEIPT VIA INTERNET			¦ RETAIL TRANSACTION
Y CLERK	TRIGGE	1602 DISPLAY (NS	- -	SELECTION I	_	UNT 1611 SECURE EXCHANGE, PROGRAMIMAG STRIPE	-	3	1014	16				1620 ELECTRONIC RECEIPT VIA INTERNET			
AL PRIVACY LET CARD		PAYMENT	MENT WITH ECOUPONS	1605 REQUEST AUTHORIZATION & INFO	1606 PROVIDE FINGERPRINT, ECOUPON SELECTION 1607 DISPLAY ECQUPONS	1609 REQUEST CARD	UNT 1611 SECURE EXCHAI	ж —	D, HAND TO CLERK		-	_ _	1618 RETURNICARD & PAPER RECEIPT	- - -				· - -
USER DIGITAL		1603 REQUEST PAYMENT	1604 TRIGGER PAYMENT WITH ECOU	1605 REQUEST AŬT	1606 PROVIDE FINC		1610 SELECT ACCDUNT	1612 READY TO USE	1613 REMOVE CARD, HAND TO CLER				1618 RETURN		_ <u>_</u> _			

RETAIL TRANSACTION

VENDOR		-				12 SHIP PHYSICAL CONTENT	3 — —		15 SETTLE FUNDS	- -
TPCH				Eaulest), DW 10 FO	N.S.	128	L	{	<u> </u>	
JS INAL	RD	0		7 TRANSACTION REQUEST: PURCHASE RECORD, DW ID, ACCOUNT INFO	8 TRANSACTION CONFIRMATION		BUTION			
PPOS TERMINAI	2 REQUEST PURCHASE PROVIDE PURCHASE RECORD	3 VALIDATE USER, GET ACCOUNT INFO PRINT, 10N NT, 10N NT, 10N 10 NT, 10 N		PUR	AATION		13 SECURE CONTENT DISTRIBUTION	14 CONFIRMATION OF RECEIPT		
BROWSER !	EQUES OF PUR	E	DATED DATA		oweira Oweiran	<u> </u> 	JRE COI	TION O		· -
BRO	2 R PROVI	DATE USE	6 USER VALIDATED ACCOUNT DATA		9-11 TRANSACTION CONFIRMATION		13 SECL	ONFIRMA		
DIGITAL WALLET	CHASE	- 3 VALI RPRINT, \$TION BINT,			TRANS.			14 0	=	
DIG	1 TRIGGER PURCHASE	ST FINGE INT SELE FINGERP			9-1	1				
USER	1 TRIG	4 REQUEST FINGERPRINT, ACCOUNT SELECTION FROVIDE FINGERPRINT, ACCOUNT SELECTION						7	-	

FIG. 17

WEB TRANSACTION



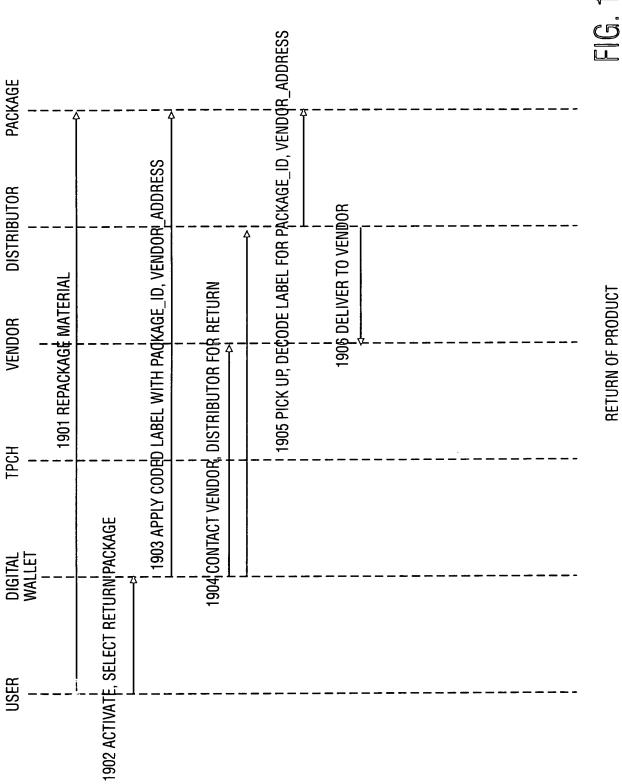


FIG. 19

POS TERMINAL	-			. – – –				
VENDOR I		ATA & DW ID	T MARKETING			x	, -	 -
ТРСН	DUCT INFO INFORMATION	E DATA & DW ID	2006 DATA MINING, DIRECT MARKETING		<u>-</u>			
VTO .	ASE 2002 REQUEST PRODUCT INFO 2003 RETURN PRODUCT INFORMATION	TRANSACTION REQUEST, PROVIDE DATA & DW ID	2006 DATA MINING		:DED	ж — 		
DIGITAL WALLET	2001 ACTIVATE, SELECT PURCHASE	2004 ISSUE TRANSACTIO	2007 FILL MF	2008 NOTIFY USER	2009 VIEW GONTENT, RESPOND AS NEEDED			 -
USER	2001 ACTIVAT	50	- 	± 600 ± 200	2009 VIEW GON	L		

FIG. 20

DATA MINING

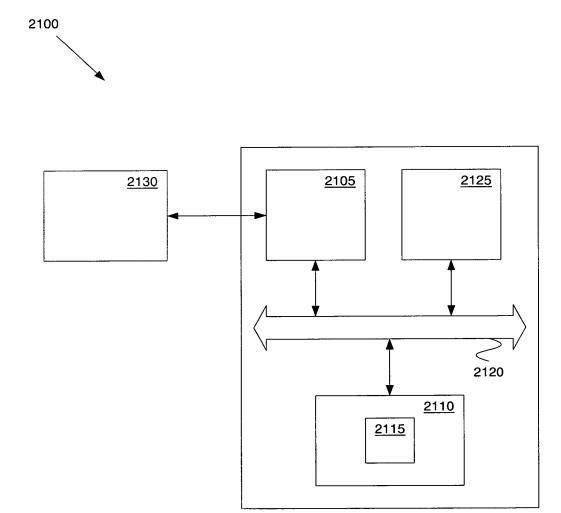


FIGURE 21

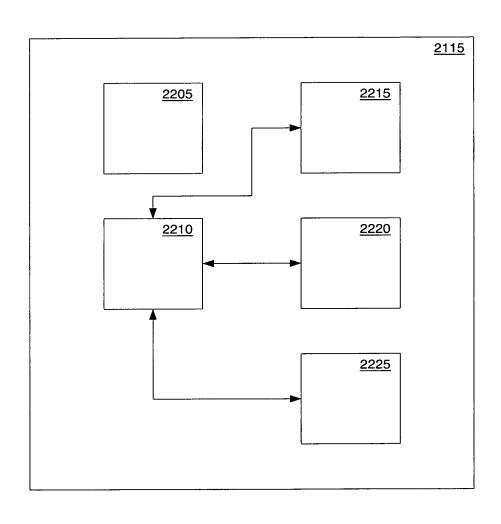


FIGURE 22

FIGURE 23

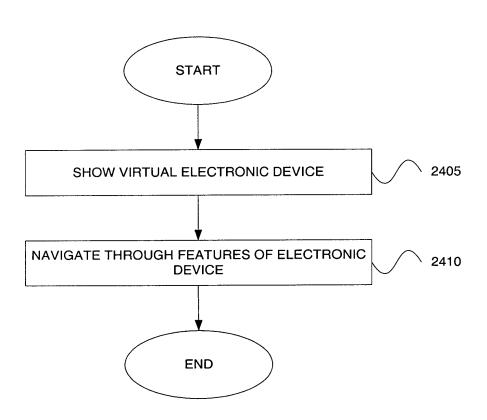


FIGURE 24

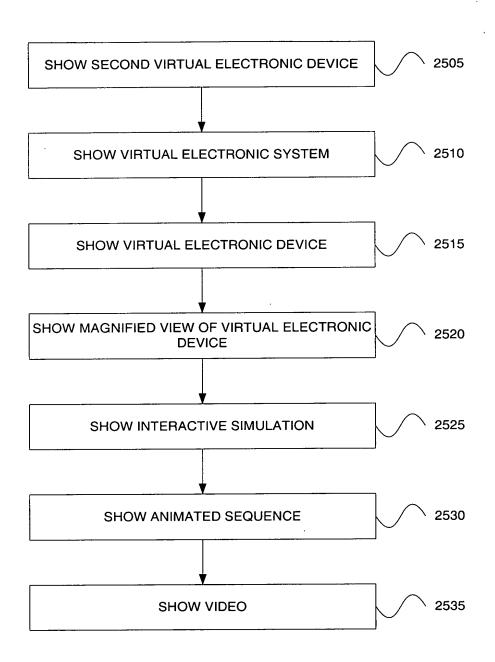


FIGURE 25